

Red Shiner Invasion of Southeastern Streams: Dynamics and Ecological Consequences

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Red shiners, a minnow species native to streams of the central U.S., are spreading to other regions due to their widespread use as a bait fish. Their expansion into new habitats comes at the expense of their native relatives. Red shiners are aggressive competitors for food and spawning habitat and interbreed with other species, swamping native populations with their own genes. These combined impacts have resulted in local extinction of native species. Red shiners were recently introduced into several Southeastern rivers and now pose a serious threat to the region's unique and diverse community of native fishes. We have initiated a study to determine how human disturbance and other environmental factors affect the spread of red shiners. This research will also identify the behavioral and genetic components of native species displacement. Our research supports the Agency's mission to protect biological integrity by providing the tools to forecast the spread of this invasive species; by identifying native, at-risk species; and by offering management solutions to curb expansion of red shiners into uninvaded watersheds. Although this work was reviewed by EPA and approved for publication, it may not necessarily reflect official Agency policy.